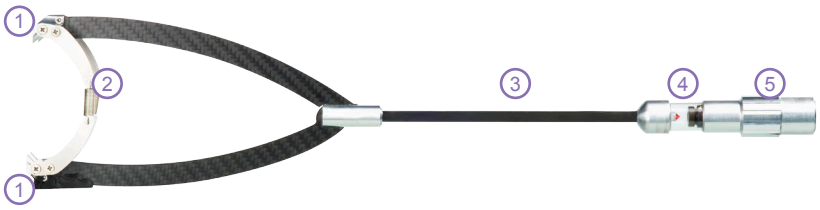
# QUICK USER GUIDE DEFORMATION LASER

## Range of Use

DN200 - DN400

## Structure




| | |
|---|---|
| 1 | Clamping teeth |
| 2 | Spring hinge |
| 3 | Glass fiber rod |
| 4 | Laser |
| 5 | Batterie compartment |

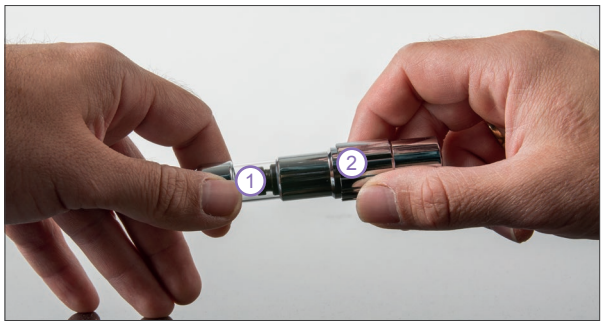
## Mounting and Initial Operation

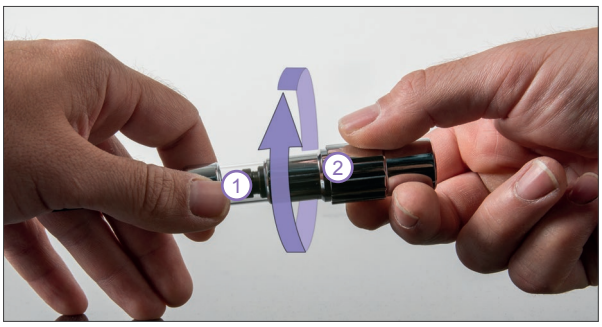
**WARNING!**

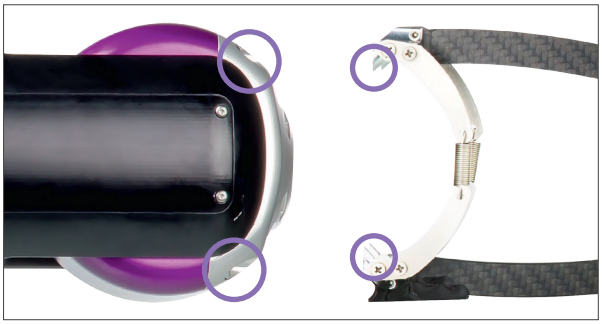
***Improper Use***

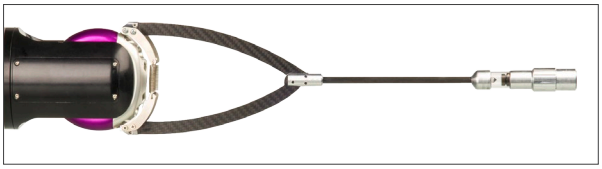
Use of the laser rod is possible in connection with the crawler F-200 only. Therefore:

- Mounting the laser rod onto other crawlers or cameras is prohibited. Damage resulting from improper use is not covered by the manufacturer‘s warranty.





**NOTE**

The laser is being operated with a CR2 battery, which is located in the front screw compartment (2) and must be replaced from time to time.

*Initial Operation Laser*

The deformation measurement should be conducted after the inspection while the crawler drives back to the starting point. Therefore, the laser should/can be mounted in the destination manhole.

1. When turning the deformation laser on or off or exchanging the battery, you **must** hold the device in the correct places (1 and 2) as shown above.

**WARNING!**

***Risk of injury!***

Improper operation of the device may cause severe injuries due to the glass-fiber rod breaking.

Damage resulting from improper use is not covered by the manufacturer‘s warranty.

2. To engage the laser (1), turn the threaded battery compartment (2) clockwise. To disengage the laser, turn it counter-clockwise.

*Mounting to the Crawler*

1. Latch the four clamping teeth into the four allocated notches on the camera head. To do so, slightly pull the two brackets of the laser fixture apart.

2. For dismounting, proceed in the reverse order.

## WARNING!

***Damage to camera head and deformation laser***

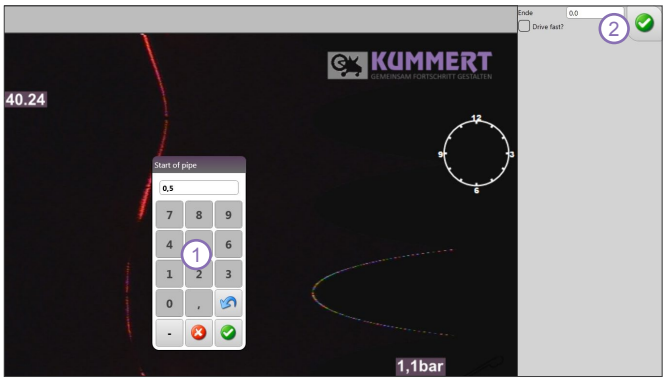
The Profi 3 software does not recognize whether the laser fixture is mounted onto the crawler or not. If the camera head is being panned or tilted with the laser being mounted, the laser fixture can be lost in the pipe and/or damage to the crawler and laser may occur. Therefore:

- Lock the camera head after mounting the laser onto the crawler via the software (click the yellow lock).
- Do neither pan nor tilt the camera head via software controls on the Profi 3.
- Avoid having the laser hit the pipe‘s inner wall by not steering the crawler manually.
- Dismount the laser prior to lowering the crawler into or lifting it out of a manhole.

The deformation measurement is conducted via the Profi 3 software. To create a new deformation measurement, select the pipe/sewer section to be inspected in the Live/TV inspection mode.

If the sewer section is yet to be surveyed, click on the option **New sewer section (1)** and complete the survey.

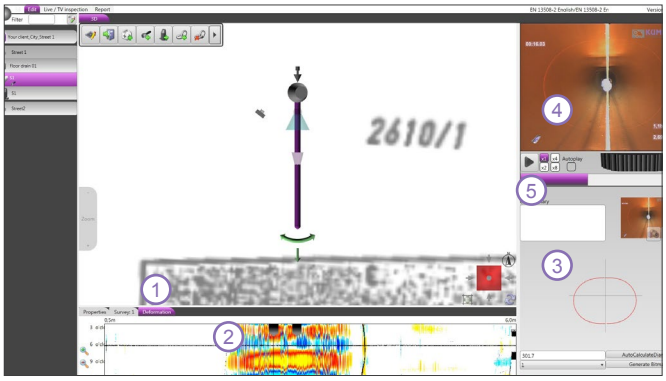
Once the end of pipe has been entered, click on the **control button (2)** and select the option **New deformation measurement (3)**.




Click on the button **Start**. Click on the three dots in the field **End** to open a number keyboard. Enter the **position (1)** that the crawler should drive back to.

**To avoid the crawler driving back too far, we recommend a meter count of 0.5 m.**

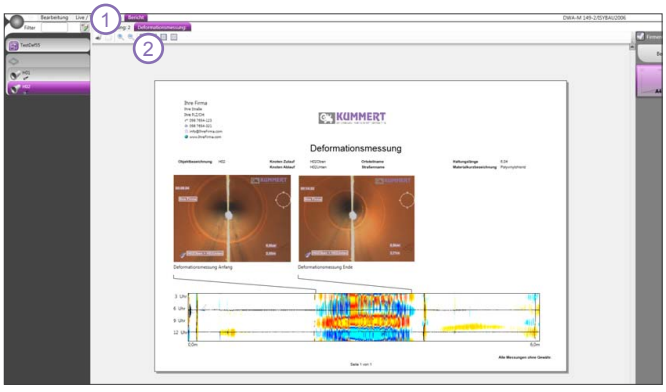
Click **OK (2)**. The crawler now drives backwards and conducts the laser measurement.




The recorded deformation measurement can be found unter tab **Deformation (1)**.

A colored **chart (2)** shows deformed areas.
The deformation‘s **cross-section (3)** and corresponding **video (4)** display on the right-hand side.

When clicking anywhere in the **chart (2)**, the video und cross-section move to the respective spot.
Use the **green plus sign (5)** to enter additional information or capture photos, which will then be displayed in the report.




To view the report, switch to the tab **Report (1)** and **Deformation measurement (2)**.

All entered information and photos are displayed according to their meter count.



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